### WEST NILE VIRUS PREVENTION & CONTROL

To decrease exposure to mosquitoes and the infections they may carry:



Avoid spending time outside when mosquitoes are most active, especially at dawn and dusk.



When outdoors, wear long pants, long sleeve shirts and other protective clothing.



Apply insect repellant according to label



Make sure that doors and windows have tight fitting screens. Repair or replace screens that have tears or holes.



Eliminate all sources of standing water on your property that can support mosquito breeding.



Contact your local mosquito and vector control agency if there is a significant mosquito problem where you live or work.

Published by the State of California California Department of Health Services Division of Communicable Disease Control Sacramento, CA (916) 552-9730 www.dhs.ca.gov/ps/dcdc/dcdcindex.htm

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> -Prepared April 2002-Updated December 2002

### WHAT IS THE CALIFORNIA **WEST NILE SURVEILLANCE** PROGRAM?

The California Department of Health Services (DHS) has overseen a statewide mosquitoborne encephalitis surveillance program since 1969 for Western equine encephalitis (WEE), St. Louis encephalitis (SLE), and other viruses. In 2000, DHS and other agencies expanded the program to enhance the ability to detect WNV. A protocol to report and test dead birds was added to the existing surveillance system for encephalitis cases, mosquito testing, and monitoring of sentinel chickens.

### **Encephalitis Case Surveillance**

DHS tracks cases of human, horse, and ratite (e.g., emu, ostrich) encephalitis. The routine testing of encephalitis cases for WNV assists in the early detection of the virus in California. Human and animal encephalitis cases are also routinely tested for WEE and SLE viruses.

### Mosquito Testing

Mosquitoes throughout the state are sampled for the presence of WNV, WEE, and SLE viruses. Local mosquito and vector control agencies also monitor the abundance and type of mosquitoes.

### Sentinel Chicken Testing

Over 200 chicken flocks are strategically placed throughout the state and are tested routinely during the mosquito season to detect evidence of infection from WNV. WEE, or SLE viruses.

### **Dead Bird Surveillance**

California began to test dead crows and related birds for WNV in 2000. Monitoring dead crows and other birds will help identify where the virus is occurring in the State. State agencies, private organizations, and individuals participate in the surveillance program by reporting dead bird sightings. DHS arranges to collect the dead bird from the location it was found if WNV testing is appropriate.

# WHAT DO I DO IF I SEE A **DEAD BIRD?**



#### AMERICAN CROW

American crows are found throughout most of California. They have entirely black plumage, black beak, and black feet. Adult size is 17-21 inches from tip of tail to tip of beak.

If you find a dead bird, particularly a crow, jay, magpie, or raven, please call the number below promptly. Do not touch the bird. DHS will record all dead bird reports and will arrange for pickup and laboratory testing for WNV when appropriate.

### **Dead Bird Surveillance and Contact** Information:

West Nile Virus Dead Bird Surveillance Program Division of Communicable Disease Control California Department of Health Services Toll Free Telephone: 877-WNV-BIRD (877-968-2473)

E-mail: arbovirus@dhs.ca.gov Website: http://www.westnile.ca.gov







CALIFORNIA SURVEILLANCE AND FACTS ABOUT

# West Nile Virus



## WHAT IS WEST NILE VIRUS?



West Nile virus (WNV) is a mosquito-borne virus that has been found in parts of Asia, eastern Europe, Africa, and the Middle East. The virus was first detected in the United States (U.S.) in 1999 in New York City.

The majority of people and animals that are infected with the virus have a mild illness or no symptoms. In rare cases, the virus can cause a more serious condition called encephalitis, an inflammation of the brain. The elderly are at a higher risk for disease caused by WNV. In 2002, a total of 44 states reported WN virus activity and over 4,000 human cases were reported including over 250 deaths.

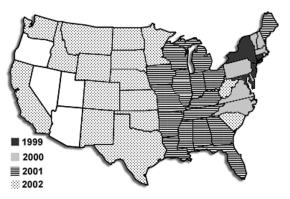
In California, one human case of locally-acquired WNV was found in Los Angeles County. Further WNV activity was not found in the state in 2002.

### HOW DO PEOPLE AND ANIMALS GET WEST NILE VIRUS?

WNV is transmitted to people and animals by infected mosquitoes. Only certain species of mosquitoes carry the virus and very few mosquitoes are actually infected. A mosquito first acquires the infection by feeding on a bird with virus in its blood. The virus lives in the mosquito and is transmitted to a new host in the mosquito's saliva when the insect bites a person or animal. The virus is most prevalent from May to October when mosquitoes are most abundant.

Human-to-human transmission of WNV generally does not occur. However, human WNV infection was associated with blood transfusions and organ transplants from infected donors in 2002.

# Spread of West Nile Virus in the United States 1999-2002



WHAT ARE THE SYMPTOMS OF WEST NILE VIRUS IN PEOPLE?

Most people who are infected with WNV have no symptoms whatsoever. However, of those who become ill, symptoms can include fever, headache, nausea, body aches, mild skin rash, or swollen lymph nodes. In a few cases, the disease will progress to encephalitis (inflammation of the brain). The time between the mosquito bite and the onset of illness, known as the incubation period, ranges from 5-15 days in humans. It is estimated that 1 in 150 people who are infected with WNV will require hospitalization. Of the over 4,000 confirmed human cases of WNV in the U.S. in 2002, 6% died. The elderly are particularly susceptible to clinical illness caused by WNV. There is no specific treatment for infection with WNV, although supportive care is important.

# WHICH ANIMALS GET WEST NILE VIRUS?

An infected mosquito can bite any animal, but not all animals will become infected. The disease most often affects birds, but occasionally causes disease in other animals as well.

### **Birds**

Wild birds are the animals from which the mosquito vector primarily acquires the virus. Infection has been reported in more than 100 bird species. Although many birds that are infected with WNV will not appear ill, WNV infection can cause serious illness and death in some birds. The most severe illnesses are seen among the corvid birds, which include crows, jays, ravens, and magpies. American crows constitute the majority of birds reported dead due to WNV.

#### Horses

Like people, most horses bitten by mosquitoes will not become sick with WNV.

However, of those that do, signs may include stumbling, circling, hind leg weakness, inability to stand, muscle tremors, and death. A vaccin

bling, circling, hind leg weakness, inability to stand, muscle tremors, and death. A vaccine to prevent WNV illness in horses is available from your veterinarian. WNV vaccine and other vaccines against mosquito-borne diseases (western equine encephalitis and eastern equine encephalitis) should be given in the early spring. For more information on WNV and horses, please visit the website: http://www.cdfa.ca.gov/ahfss/ah/wnv\_info.htm.

### TRANSMISSION CYCLE OF WEST NILE VIRUS

